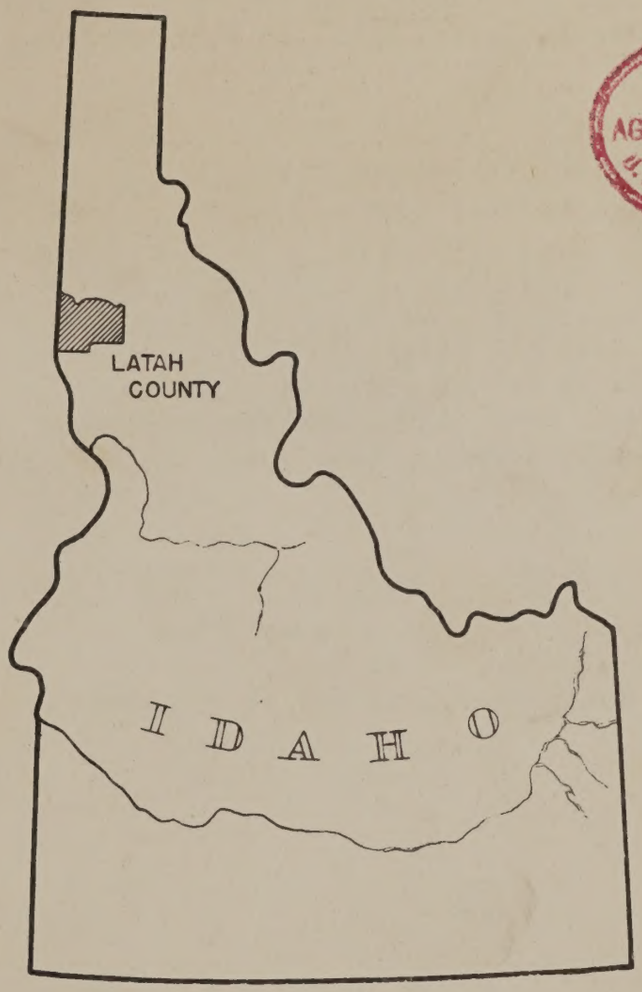
A LAND USE CLASSIFICATION

of

LATAH COUNTY, IDAHO



UNITED STATES DEPARTMENT OF AGRICULTURE
RESETTLEMENT ADMINISTRATION, REGION XI
MAYER BUILDING, PORTLAND, OREGON

JUNE 1937

R E S E T T L E M E N T A D M I N I S T R A T I O N

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SUMMARY

This land classification study is an attempt to reach certain conclusions regarding needed readjustments in the use of rural lands in Latah County. These readjustments have been made increasingly necessary by such factors as the decline of the timber industry and the influx of new settlers into the county with a consequent increase in land-clearing activity. Unfortunately, the choice of farm sites has not always been made where farming can be put on a profitable basis.

To assist settlers to find the best available locations and also give some guidance in the extension of public services and credit, a study based on pertinent physical, economic, and social data has been made which classifies various areas of the county as to the best major uses to which they might be put. Four classes of lands have been differentiated as follows:

- Forest Areas
- Grazing Areas
- Areas Offering Special Land Management Problems
- Areas Suited to Both Cash-Crop and Livestock Farming

Each area has been discussed in terms of the major use to which it is best suited, as well as such exceptional features as are peculiar to the area which modify such recommended use. It must be borne in mind that it is possible that some locations within areas classified as agricultural will not repay the cost of development for farming purposes. On the other hand, small bodies of agricultural land in non-agricultural areas should not be developed if the cost of providing adequate public facilities will be increased unduly. Each location must be appraised on its own merits.

It is hoped that all interested individuals and agencies may use the factual data contained in this report to make more beneficial use of the rural lands of Latah County.

SUMMARY

This land classification study is an attempt to reach certain conclusions regarding needed readjustments in the use of rural lands in Latah County. These readjustments have been made increasingly necessary by such factors as the decline of the timber industry and the influx of new settlers into the county with a consequent increase in land-clearing activity. Unfortunately, the choice of farm sites has not always been made where farming can be put on a profitable basis.

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RESOLUTION

WHEREAS, decline in the timber industry due to depletion of timber supplies and migration of settlers from other regions has caused a rapid influx of settlers into the rural areas of Latah County, and

WHEREAS, there is great variation in the agricultural productivity of cutover land in Latah County, and land clearing is a time-consuming and expensive operation to be undertaken only upon lands of known worth, and

WHEREAS, past undirected settlement has resulted in losses of capital invested in poor farm lands, heavy relief loads, high per capita cost of roads and schools and deterioration of soil and loss of watershed values on certain lands, and

WHEREAS, it is felt that a sound land use program will result in the greatest permanent welfare of the people of Latah County, and

WHEREAS, this committee has had under consideration "A Land Use Classification of Latah County," a report prepared by the Land Use Planning Section of the Resettlement Administration,

BE IT RESOLVED THAT:

1. The information contained in this land classification study be made available to the people of the county in order that better use of the land of the county may be encouraged.

2. In disposing of county-owned land, the county, as a general policy, sell to prospective farmers only such lands as are in areas classified as agricultural.

3. County lands in non-agricultural areas be sold only under suitable safeguards to insure that agricultural development will not be attempted on such lands.

4. The cooperation of other land-selling agencies be requested in furthering the recommendations embodied in this report in order that no sale of lands to prospective farmers be made in non-agricultural areas.

5. The improvement and extension of public services be not encouraged in non-agricultural areas unless such improvements and extensions are necessary parts of a comprehensive plan involving a wider area.

6. Loans for the development of lands for agricultural purposes be encouraged only when they lie in agricultural areas.

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6. Loans for the development of lands for agricultural purposes be encouraged only when they lie in agricultural areas.

7. Land-clearing projects in agricultural areas receive immediate consideration in the permanent solution of the relief problem.

8. Local planning agencies give consideration to the proper use and administration of the lands classified as non-agricultural and, working through all available channels, seek to bring about such consolidation of ownership, under the agency or agencies most capable of administering said lands, as is necessary to insure the use of the lands for the permanent welfare of the people of the County, State, and Nation.

Unanimously adopted June 5, 1937 by the following:

COUNTY COMMISSIONERS

Walter Driscoll
James Blane
I. E. Snow

COMMITTEE REPRESENTING FARMERS

Rudolph Nordby
William Smith
James Blane

7. Land-clearing projects in agricultural areas receive immediate consideration in the permanent solution of the relief problem.

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Unanimously adopted June 8, 1937 by the following:

COUNTY COMMISSIONERS

Walter Driskoll
James Kline
T. E. Crow

COMMITTEE REPRESENTING FARMERS

Rudolph Moraty
William Smith
Jesse Kline

ACKNOWLEDGMENTS

The encouragement, assistance, and advice given by many individuals in connection with this study are greatly appreciated. The services of the following have been especially valuable: Roscoe E. Bell, Regional Soil Technologist, H. E. Selby, Regional Chief, Carroll Dwyer, Assistant Regional Soil Technologist, and Dr. W. A. Dreesen, Advisory Regional Public Finance Specialist, Land Use Planning Section, Resettlement Administration, Region XI; Harold A. Vogel, Head, Programs Analysis Subunit, Land Use Planning Section, Resettlement Administration, Washington, D. C.; Meyer Wolff, Assistant Regional Forester, and H. H. Gurley, Associate Forester, United States Forest Service, Region I; Dr. Paul A. Eke, Head, Department of Agricultural Economics, University of Idaho; County Commissioners James Blane, I. E. Snow, and Walter Driscoll; committee representing the rural people of Latah County composed of James Blane, Rudolph Nordby, and William Smith; G. T. McAlexander, County Agent; and Dr. H. H. Preston and Prof. Joseph Demmery, College of Economics and Business, University of Washington.

In addition, data have been furnished by several agencies. Those agencies include the Department of Agricultural Economics and the Department of Agronomy and Soils of the University of Idaho, U. S. Forest Service, Soil Conservation Service, Idaho Emergency Relief Administration, County Superintendent of Schools, and the Idaho State Planning Board. Furthermore, the services of two W.P.A. clerks were furnished by the Idaho State Planning Board from W.P.A. Project number O.P. 65-92-787 W.P. 455.

A LAND USE CLASSIFICATION

of

LATAH COUNTY, IDAHO

by

Carl Tjerandsen

THE PROBLEM

In Latah County, agriculture and the timber industry predominate. Of the total land area of approximately 685,440 acres, the 1935 census showed that about 222,000 acres were available for crop production. Of the remaining area, the greater part is now or has been in timber. We find, however, that in Latah County, as in other North Idaho counties, the timber industry has been suffering a rapid decline due to depletion of timber supplies. According to a report prepared by the United States Forest Service in 1934, the mature-sized timber acreage amounted to only 108,560 acres out of a total forest area of 330,720 acres and only a part of this mature timber area supported stands available for logging under existing economic conditions. Practically all of the area which is now in forest should continue to remain so. In general, it is unsuitable for permanent agriculture and timber cover is needed for watershed and soil protection and for recreation. The decline of employment in the timber industry has forced a large proportion of the population of the county to try to make a living in some other way.

During the depression, the only other opportunity which has been open has been in agriculture. This movement toward the land has created a considerable pressure upon the available developed farm land. The situation has been intensified by the migration into the county of farmers from drouth areas seeking farms upon which they could reestablish themselves. According to the census, there was an increase of approximately 125 farms in the county between 1930 and 1935. Although no accurate figures are available, it has been estimated that there has been a 50 percent additional increase between January 1 and September 1, 1936. As a result, available developed farms have become scarce.

Unfortunately, it is difficult for the uninformed individual to appraise accurately the agricultural value of cutover land. There has been, as a consequence, much attempted development of farm lands under unfavorable conditions. Not only have individual farmers lost their invested capital, but the public has been forced to bear an added burden. We find, for example, that in Latah County over two hundred rural families were on relief under the Idaho Emergency Relief Administration program, which was set up in 1934. Where settlement has been scattered, the high cost per family of public services in relationship to the tax base has served to increase still further the burden borne by the community.

OBJECTIVES AND METHOD OF CLASSIFICATION

The problems as discussed point to the objectives which have given direction to this study, namely, to determine the areas where

present occupancy is undesirable; second, to guide land settlement into desirable areas; third, to guide the distribution of public services; fourth, to guide the granting of credit; fifth, to determine the causes of the rural relief problem and the possible solutions available; and, sixth, to lay the foundation for a sound land use program for all rural lands in the county.

The process of classification in general outline was primarily one of, first, differentiating the land use districts on the basis of their physical characteristics, giving particular attention to soils, topography, climatic factors, and cover types. The boundaries were then changed in the light of the available economic data, including data on average wheat yields, relief, tax delinquency, census records, assessor's classification of lands, assessed valuation of agricultural land, cropping systems, the distribution and costs of public services, and farm records. The third step involved the checking of these boundaries by field inspection.

THE LAND CLASSES

The classification of lands which resulted (Figure 1) recognizes four major types of use to which the rural lands of Latah County can be put. They are:

Forest Areas

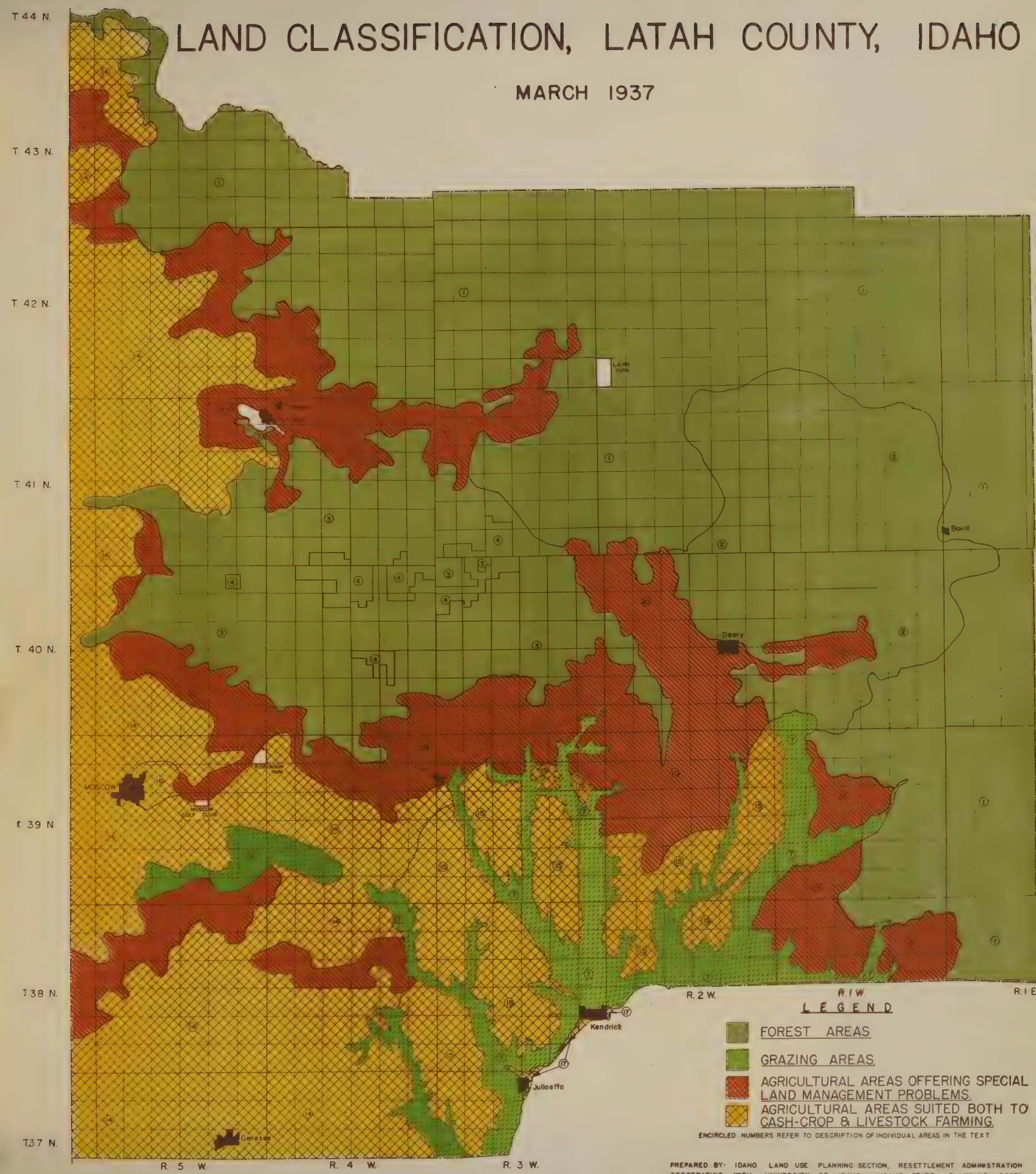
Grazing Areas

Agricultural Areas Offering Special Land Management Problems

Agricultural Areas Suited Both to Cash-Crop and Livestock Farming

LAND CLASSIFICATION, LATAH COUNTY, IDAHO

MARCH 1937



PREPARED BY: IDAHO LAND USE PLANNING SECTION, RESETTLEMENT ADMINISTRATION COOPERATING WITH: UNIVERSITY OF IDAHO; IDAHO STATE PLANNING BOARD; U. S. FOREST SERVICE; IDAHO EMERGENCY RELIEF ADMINISTRATION AND THE WORKS PROGRESS ADMINISTRATION.

Drawn By R. M. Tidyman

This classification represents broad, generalized areas in which a majority of the lands are adapted to the indicated use, but necessarily includes numerous small areas unsuited to this particular use. The land classification map is not a substitute for a detailed soil survey, and land should be purchased only after careful examination of the individual tract.

The generalized land use indicated is not an objective for immediate attainment, but rather a goal for orderly development of the county over a period of years. It should be recognized, also, that changes in the classification undoubtedly will be desirable and necessary from time to time as additional information about specific areas becomes available and as economic conditions change.

The four major land classes are described as follows:

Forest Areas. Forest land is so classified because the existence of certain combinations of soil, topography, climate, and location make it better suited to forestry than to any other use. These areas have, in general, the following characteristics: (1) The topography is too rough to permit setting up economic farm units; (2) The soils are low in organic matter content as well as of fine-textured material and, consequently, quite highly erosive unless protected by vegetation; (3) Climatic factors are unfavorable to crop production; (4) Many of the farmers in the area are on relief; (5) Public services cannot be maintained without excessive public subsidy; (6) In certain small parts of this area, some of the conditions might be favorable for agriculture, but other uses should predominate as, for example, recreation, watershed protection, etc.

The total area of these lands is about 347,600 acres.

Grazing Areas. Grazing land is land which, because of certain combinations of soil, topography, climate, location, and cover, is best suited for grazing use in connection with nearby agricultural lands. These lands consist of the steeper slopes in the canyons and on Tomer's Butte and Paradise Ridge. The soil mantle is very shallow in most cases. For these reasons they cannot be farmed, but they do furnish good supplementary pasture for the nearby farming area. There are approximately 47,400 acres of these lands.

Agricultural Areas Offering Special Land Management Problems. By Agricultural Areas Offering Special Land Management Problems, as contrasted with Agricultural Areas Suited to Both Cash-Crop and Livestock Farming, is designated land that is limited as to the variety of crops which can be grown, due to one or more of the following conditions: (1) soils developed under forest cover resulting in a comparatively low organic fertility; (2) moderately rough topography, especially on borders of forest lands; (3) severe erosion problem on cultivated lands; and (4) less favorable climatic conditions. The total acreage of these lands amounts to about 115,500 acres.

Agricultural Areas Suited to Both Cash-Crop and Livestock Farming. By Agricultural Areas Suited to Both Cash-Crop and Livestock Farming, as contrasted with Agricultural Areas Offering Special Land Management Problems, is meant land which because of certain combinations of soils, topography, and climate are well suited to the production of the crops grown in the region. Since the yields of the principal cereal crops are high enough to justify their production, and the

[illegible]

[illegible] : land which, because of co[illegible] ditions of soil, topography, climate, location, and cover, is not suited for [illegible] lands. These lands consist of the steeper slopes in the canyons and on Temple Butte and Paradise Ridge. The soil mantle is very shallow in most cases. For these reasons they cannot be farmed, but they do furnish good supplementary pasture for the nearby farming areas. There are approximately 47,100 acres of these lands.

[illegible] Lands (B): [illegible]

[illegible] contrasted with Agriculture [illegible] and live-stock carrying, is designated land that is [illegible] variety of crops which can be grown, the [illegible] following condi-tions: (1) soils developed under forest cover resulting in a [illegible] and only low organic fertility; (2) [illegible] especially on [illegible]; (3) [illegible] cultivated lands; and (4) [illegible] climatic conditions. The total [illegible] of these lands amounts to about [illegible] acres.

Agricultural Areas Suited to [illegible] and [illegible]

Farming. By Agricultural Areas [illegible] and Live-[illegible] Lands, as contrasted with Agricultural [illegible] land now [illegible], is meant land which because of [illegible] in conditions of soils, topography, and climate are well suited to the [illegible] crops grown in the region. Since the [illegible] of the [illegible]

soils are such as to permit a cropping system dominated by grains and peas, these areas are well suited to a cash-grain type of enterprise as well as livestock enterprise. The total area involved is about 176,000 acres.

Forest Areas (Areas 1 - 5)

Description of Areas

AREA 1. This area includes most of the rough, mountainous portions of the county. Practically all of it has been timbered at one time or another. At the present time, much of the area has been cut over and some lands have been cleared. Reference to Figure 2 will show the main types of cover in the area. Particular notice should be taken of the large proportion of cutover land, much of which is not restocking.

Along the fringes of the adjoining agricultural area, we find that a number of attempts are being made to farm land within the borders of Area 1. There are about 120 quarter sections in the area which contain land assessed as agricultural with usually less than 30 percent of the quarter section so assessed. The assessed values of most of these agricultural lands are under $20.00 per acre, with about one-half under $13.00 per acre.

Practically all of the privately-owned land was delinquent in September 1934, for the 1932 levy.* This was primarily the result of three factors: (1) the tax moratorium; (2) the decline in agricultural prices; and (3) the removal of timber from certain areas which made payment of taxes no longer necessary from the owners' point of view. The earlier delinquencies were practically all on cutover lands.

Except in Township 42 N., Ranges 4 and 5 W., where private individuals own most of the land, the ownership of the area is divided equally between the Federal Government and private corporations other than credit corporations. The largest private owner in the area is the Potlatch Forests, Inc.

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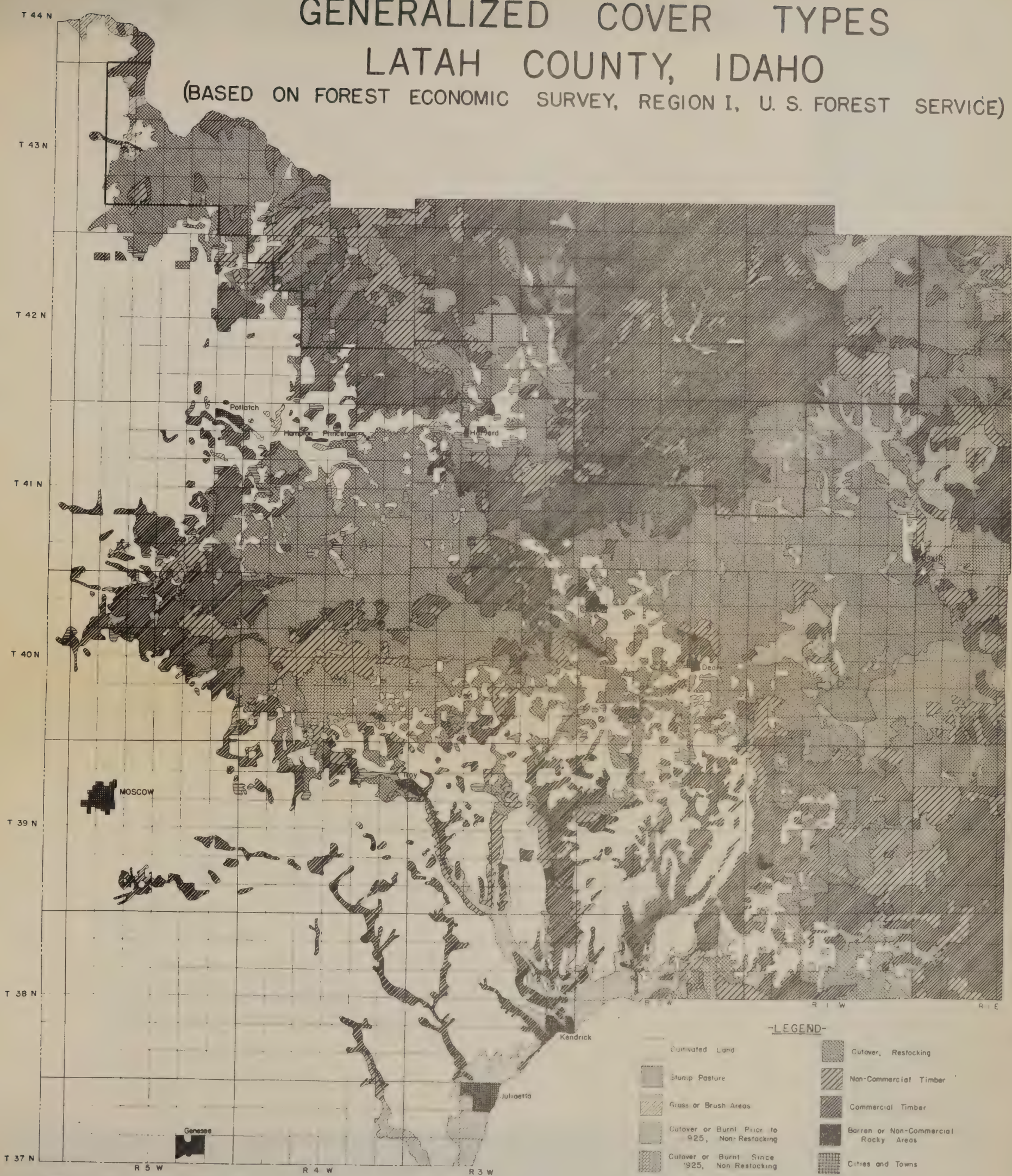
*In most cases due to the operation of the tax moratorium where land was delinquent for a particular levy, it was also delinquent for one or more subsequent levies.

GENERALIZED COVER TYPES
LATAH COUNTY, IDAHO
(BASED ON FOREST ECONOMIC SURVEY, REGION I, U. S. FOREST SERVICE)



Prepared by: Idaho Land Use Planning Section,
Cooperating with: U. S. Forest Service.
July 1936

FIGURE 2

Some significant changes in the ownership of privately owned lands took place between 1933 and 1936. In the former year the county owned six parcels of land. In 1936, the county acquired fifty additional parcels of land. The total acreage involved (about 10,000 acres) was not great, but it indicates that a maladjustment in land use existed. For the most part, these properties were either stump ranches or small cutover tracts.

There were about ten rural relief clients in the area, all of whom had too little land under cultivation to obtain a family living. None of these properties permitted of the development of eighty acres of cleared land. In only a few cases would consolidation of units solve the problem, topography being the main limiting factor.

Not only does topography limit agriculture in the area, but often the soils are so poor that they become unproductive after a short period of cropping. For example, on a farm in Sec. 8, Township 42 N., Range 4 W., which was about to be abandoned, alfalfa yields were only three-fourths of a ton per acre. In Sec. 34, Township 42 N., Range 4 W., there is a farm straddling the ridge where the soils contain so much shale rock and are so shallow that they have a very low water-holding capacity. In addition, domestic water must be hauled for several miles. These conditions are illustrative of those found over a large part of the area.

AREA 2. This area north of Bovill differs from Area 1 in that it contains small tracts of meadowland and brush, which furnish excellent range for beef cattle and, to a less extent, for sheep. These meadowlands are not suited to crop production because of the short growing season.

The grazing rights within the area are now administered by the United States Forest Service, and probably this practice should be continued. Tree plantations for reforestation purposes have already been established in the area.

AREA 3. Area 3 coincides roughly with what is known as Moscow Mountain, and it is one of the most serious problem areas in the county.

The area is predominantly restocking cutover land, with some bodies of commercial timber. The proportions are approximately as follows: three-fourths, restocking cutover; one-eighth, commercial timber; and the remainder, non-commercial timber and non-restocking cutover. In addition, there are many farms along the lower slopes of the mountain, but they have, on the average, only a small cultivated acreage.

There are about 140 quarter sections in Area 3 which contain land assessed as agricultural. In over one-half of the cases, the agricultural land represents less than 30 percent. About one-third of the quarter sections have between 50 and 69.9 percent of their

[illegible] significant change in the amount of privately owned land [illegible] between 1924 and 1930. In the three year the county owned [illegible] acres of land. The total acreage involved (about 10,000 acres) was [illegible] small, but it indicates that a readjustment in land use is [illegible] cutover areas.

There were many top rural relief clients in the area, all of whom had too little land under cultivation to obtain a family living. [illegible] of these properties permitted of the development of only [illegible] of cleared land. In only a few cases would consolidation of units solve the problem, topography being the main limiting factor.

Not only does topography limit agriculture in the area, but [illegible] the soils are so poor that they become unproductive after a short period of cropping. For example, on a farm in Sec. 8, Township 41 [illegible], Range 4 W., which was found to be abandoned, yields were only three-fourths of a ton per acre. In Sec. 24, Township 42 [illegible], Range 4 W., there is a farm adjoining the village where the soils contain so much shale rock and are so shallow that they have a very low water-holding capacity. In addition, domestic water must be hauled for several miles. These conditions are illustrative of those found over a large part of the area.

AREA 1. This area north of Bovill differs from Area 1 in that it contains small tracts of meadowland and marsh, which furnish excellent pasture for beef cattle and a large [illegible] of sheep. These meadowlands are not suited to [illegible] production because of the short growing season.

The grazing rights within the area are now administered by the United States Forest Service, and practically the practice should be continued. Free allotments for rehabilitation purposes have a [illegible] been established in the area.

Area 2. Area 2 contrasts roughly with what is known as Bonner County. It is one of the most serious problem areas in the county.

The area is predominately [illegible] cutover land, with some holdings of commercial timber. The principal [illegible] are approximately as follows: three-fourths, [illegible] cutover; one-eighth, commercial timber; and the remainder, non-commercial timber and non-[illegible] cutover. In addition, there are many farms along the lower slopes of the mountains, but they have, on the average, only a small cultivated acreage.

There are about 140 [illegible] farms in Area 2 which contain land assessed as agricultural land. In over one-half of the cases, the agricultural land represents less than 50 percent. About one-third of the farmer occupiers have between 5 and 10.0 percent of their

area assessed as agricultural.

The assessed valuations of agricultural land range from $13.00 to $19.99 per acre.

There is considerable delinquency of the 1929, 1930, and 1931 tax levies in the area, with most of it on cutover lands.

The matter of ownership is an important one because of its checkered pattern. About one-half of the area is owned by private individuals, about one-third by private corporations, and the rest by the State and Federal governments. Since 1933, credit corporations have acquired five properties and the county has acquired eleven.

There were abouty sixty rural families on relief in Area 3. When we investigate the conditions under which these people are attempting to earn a living, we find that in only a very small percent of the cases did rural relief clients have even the minimum cleared acreage considered requisite to obtaining a fair family living. Furthermore, in case after case hay yields averaged only one ton or less per acre, chiefly because the hill soils are shallow and have poor moisture-retaining qualities. In addition, the topography is rough and broken. As a result, fields are too small for the efficient use of machinery, and rapid run-off washes away the topsoil.

In many of the creek bottoms, especially on the north side of the area, local frost pockets make farming very hazardous.

AREA 4. This area on Moscow Mountain comprises lands now under the control of the School of Forestry of the University of Idaho which are being managed on an experimental forest basis. These lands were largely acquired through donations by the Potlatch Lumber Company. The area now has a cover comprised of merchantable timber, second-growth timber, and stumps.

AREA 5. This area on Moscow Mountain comprises 120 acres of timber land, now under the management of the United States Forest Service, which might be acquired by the School of Forestry of the University of Idaho and administered in connection with Area 4.

Conclusions and Recommendations

These areas are unsuitable for agriculture. The major use is unquestionably forestry. Billions of board feet of white pine and yellow pine have already been cut, and the area has high timber productivity with proper management. Other uses are recreation, watershed protection, and grazing.

The prime obstacle to the best use of these areas is the ownership pattern, because the realization of the objectives contemplated

[illegible]

[illegible]

There is considerable delinquency of the 1929, 1930, and 1931 tax levies in the area, with most of it on cutover lands.

The matter of ownership is an important one because of the concentrated patterns. About one-half of the area is owned by publicly individuals, about one-third by private corporations, and the rest by the State and Federal governments. Since 1932, credit corporations have acquired five properties and the county has acquired eleven.

There were about sixty rural families on relief in Area 5. Then we investigate the conditions under which these people are attempting to earn a living, we find that in only a very small percentage of cases did farm relief aid. [illegible] have made the minimum income considered requisite to maintaining a fair family living. However, in some either case, now yields averaged only one ton, or less per acre, obviously because the land would are sandy and have poor moisture-retaining qualities. In addition, the [illegible] is frost and [illegible]. As a result, fields are too small for the efficient use of machinery and rapid turn-off weeds many [illegible].

In many of the cutover [illegible], [illegible] the sandy soils of the area, local frost pockets make [illegible] hazardous.

Area A. This area is [illegible] in [illegible] [illegible] under the control of the Bureau of Economics. [illegible] the University of [illegible] is now being managed on an experimental [illegible] basis. These lands are locally acquired through [illegible] by the [illegible] Company. The area now has a water supply and [illegible] [illegible], [illegible] growth timber, and stumps.

Area B. This area on Moose Mountain, covered on 120 acres of timber land, now under the management of the Bureau [illegible] Forest Service, will be subject to acquisition by the State of Minnesota, if the [illegible] [illegible]

[illegible]

areas are unsuitable for agriculture. The major use is [illegible] forestry. Millions of board feet of white oil [illegible] [illegible] pine have already been cut, and the area has [illegible] [illegible] [illegible], and grazing.

[illegible] to the best use of these areas is the [illegible] [illegible] availability of the [illegible] [illegible].

in the use recommended must depend upon administration of the lands in large units by an agency which is prepared to administer them from a long-range economic and social point of view. Inadequate or unstable forest fire control, and clear-cutting of timber as carried on by a typical timber company are inimical to carrying out of such objectives as watershed control, forest conservation, and creation of recreation areas as well as timber production.

Inasmuch as forestry is the best use to which these lands can be put, what agency or agencies can best promote such use. Under the existing fiscal system, development of cutover lands with private capital to the point of achieving sustained yield and other beneficial returns is generally considered impractical. High carrying costs and uncertainty of returns are emphasized by:

1. High costs of local government
   a. Obsolete organization of local governmental units
   b. High cost per person in areas of scattered settlement

2. Unsuitability of the general property tax to the problem of taxing properties which are on a deferred yield basis in that under the general property tax system, taxes must be paid each year, but in the case of forest lands the income out of which taxes must eventually be paid is received only after a long period has elapsed, and then only once

3. Reluctance of private capital to undertake such long-time investments in the face of the uncertainties which confront the timber industry

4. High expenditures necessary for protection from fire, insects, and disease

5. Outlays or sacrifices necessary for reforestation of abused forest lands, or good cutting practices in mature stands

6. Heavy mortgages on private timberlands

In spite of the research which has been expended on the problem of forest taxation, no solution applicable to all conditions of forest management has been reached. Where mature timber is in private hands, a modified form of the general property tax will possibly permit sustained yield management, but even then only temporarily. This will require a number of things:

1. A form of tax based upon time and amount of income, rather than stumpage value

2. Reduction of local governmental costs in forested areas

3. Social control of settlement in order to prevent the necessity arising of providing public services at high per capita cost

In areas which support only immature stands or which have been denuded of their forest cover, private enterprise cannot be expected to cope with the problem. The only alternative is public ownership - either state or Federal - because costs of development, protection, and management, are comparatively high while benefits are mainly social rather than financial, as, for example:

1. Regulation of stream flow

2. Preservation of wild life and recreational values

3. Prevention of erosion

4. Stabilization of local industries and communities

5. Assurance of production of materials for general industrial use

Further discussion of the land ownership problem in Latah County is given in the latter part of this report.

The recommendations for the forest land areas may be summed up as follows:

1. Directional measures should be adopted which are designed to discourage the extension of settlement in the area. The action program could include:
   a. Rural zoning
   b. Refusal by governmental credit agencies to grant credit in non-agricultural areas
   c. Refusal by the county to sell lands for agricultural purposes in non-agricultural areas

2. Conservative cutting and management of mature stands should be facilitated by making easier the carrying load of private owners through such means as tax modification and public assistance

3. The acquisition by public agencies, state or Federal, of lands bearing immature stands or which are denuded should be encouraged

Grazing Areas (Areas 6 and 7)

Description of Areas

AREAS 6 and 7. Both Areas 6 and 7 can be called, for lack of a better term, quasi-use districts because, although they are owned and operated in connection with farms contiguous to the areas, the use of the land is quite distinct from that in the agricultural areas as outlined. For that reason, the boundaries of these areas have been shown on the map by a dashed rather than a solid line. The grazing use consists of utilizing the spring and summer range available by operators of farms adjoining the areas.

Areas 6 and 7 are not suited for agriculture because of soil and topography, primarily. They are, however, advantageously located with reference to the main agricultural areas; and their use can, therefore, be integrated with the changes made necessary in the agricultural areas by a sound program of soil conservation.

The main distinction between Areas 6 and 7 is that Area 6 lies on a ridge southeast of Moscow and contains land which is now being cropped, whereas Area 7, lying in the canyons in the southeastern part of the county, has not been cropped except in isolated instances. Yields in Area 6 are low, however, and will, as a result of accelerated run-off with consequent erosion, be even lower. For that reason, it is recommended that such lands be retired from cultivation and seeded to legume and grass mixtures as a permanent cover crop. In Area 7, the cover types are mixed: commercial timber, non-commercial timber, grass, and brush.

The two areas are alike in that they both furnish low-grade pasture, i.e., pasture unsuited for dairy production. Such low-grade pastures can be used advantageously for beef cattle and sheep, which require only maintenance for a large part of the year.

Conclusions and Recommendations

Because of their location and cover, Areas 6 and 7 afford a real opportunity for increasing net income to farmers in the nearby agricultural areas.

A word of caution must be given here with regard to the matter of overgrazing. It is easy to overload a pasture without realizing the damage until too late to prevent it. This damage from overgrazing may involve one or more of the following:

1. Accelerated run-off due to the destruction of surface cover

[illegible]

[illegible]

[illegible] Areas 6 and 7 can be [illegible], for most of a better [illegible], [illegible] distance between, although they are owned and operated in connection with farms adjacent to [illegible]. The use of the land is quite distinct from that in the agricultural areas [illegible] [illegible]. For [illegible], the boundaries of these areas have been drawn on the map by a dashed rather than a solid line. The reason was consistent of [illegible] the spring and summer range available by operators of farms adjacent the areas.

Areas 6 and 7 are not suited for agriculture because [illegible] and topography, primarily. They are, however, advantageously [illegible] with reference to the major agricultural areas; and their use as [illegible], in [illegible] with the adjacent [illegible] in the [illegible] areas by a sound program of soil conservation.

The main distinction between Areas 6 and 7 is that Area 6 lies on a rather [illegible] of [illegible] and [illegible] is now being cropped, whereas Area 7, lying to the [illegible] is [illegible] part of the county, has not been cropped except in [illegible] [illegible]. Areas in Area 6 are [illegible], however, and will, as a result of [illegible] [illegible] with other [illegible], be [illegible]. For this reason, it is recommended that [illegible] be removed from cultivation and [illegible] to [illegible] and [illegible] as a permanent [illegible]. In [illegible] the [illegible] are [illegible]: commercial [illegible], non-commercial [illegible], and [illegible].

The two areas are alike in that they both furnish [illegible] pasture, i.e., pasture needed for dairy production. Both [illegible] [illegible] can be used advantageously for [illegible] and [illegible] [illegible] require only [illegible] for a [illegible] part of the year.

Conclusion: A Sound Recommendation

Because [illegible] Areas 6 and 7 [illegible] [illegible] opportunity for [illegible] [illegible] in the [illegible] agricultural areas.

A word of caution must be given here with regard to the [illegible] of overgrazing. It is easy to overfeed a pasture without realizing the damage until too late to prevent it. In a damage [illegible] may involve one or more of the following:

1. Accelerated run-off due to the destruction of surface cover

2. Retardation of plant growth by preventing the storing of food by the plant

3. Increased weed infestation

4. Elimination of the most palatable plants

As a result, it will then prove necessary to reduce the number of units grazed to less than normal capacity before the range will rebuild itself.

In summary, it may be said that the most desirable use of these areas is for pasturing beef cattle and sheep in connection with adjoining farms.

Agricultural Areas Offering Special Land Management Problems (Areas 8 - 13

Description of Areas

AREA 8. Area 8 north of Potlatch is quite small. Although the soils are mapped as Palouse silt loam, their productivity is low, yielding less (according to average yields taken from wheat allotment data) than twenty-three bushels per acre (Figure 3). Generally speaking, the recommendations are the same for this area as for Area 14, following, except that a larger proportion of each farm should be seeded to rotated and permanent pastures, thus preventing soil erosion and conserving soil fertility.

AREA 9. This area near Potlatch represents one of the better cutover farming areas of the county. The soils as mapped are mainly Helmer silt loam with a small area of Palouse silt loam in the western part.

The topography is well suited to farming, providing the steeper slopes are seeded to permanent pasture or hay.

In general, the farms in this area, together with Areas 10, 11, 12, and 13, receive more precipitation than farms on the best agricultural land out on the prairie. This accounts for the comparatively high yields of alfalfa hay in the Agricultural Areas Offering Special Land Management Problems.

The bottom lands are somewhat frosty, but not enough, usually, to prevent the maturing of the crops grown in the area. The following data on frost-free periods are the best available:

Sec. 3, Township 42 N., Range 5 W. - May 10 to Sept. 15
Sec. 11, Township 42 N., Range 5 W. - April 25 to Sept. 20
Sec. 30, Township 42 N., Range 4 W. - May 25 to Sept. 15

c. [illegible] of food by the plant

d. [illegible]

e. [illegible]

As a result, it will then prove necessary to reduce the number of units grazed to less than normal carrying before the range will recuperate itself.

In summary, it may be said that the most desirable use of these areas is for pastures but certain and proper in combination with adjacent farms.

Agricultural Areas Bordering Lower Land Management Units, Areas 5 - 7

Introduction to Areas

[illegible] 5. Area 5 north of Intervale is [illegible] small. Although the soils are mapped as Colonna silt loam, their productivity is low, yielding less (according to average yields from [illegible] where alfalfa and hay) than twenty-five bushels per acre (Figure 5). Normally speaking, the recommendations are the same for this area as for Area 4. Following, assume that a larger proportion of cash crop acreage should be devoted to rotations [illegible] soil fertility.

AREA 6. This area near Ishlate is [illegible] one of the better cultivated areas of the county. The soils as mapped are mainly Lelo silt loam with a small area of Colonna silt loam in the western part.

The topography is well suited to farming, providing the steeper slopes are seeded to permanent pasture or hay.

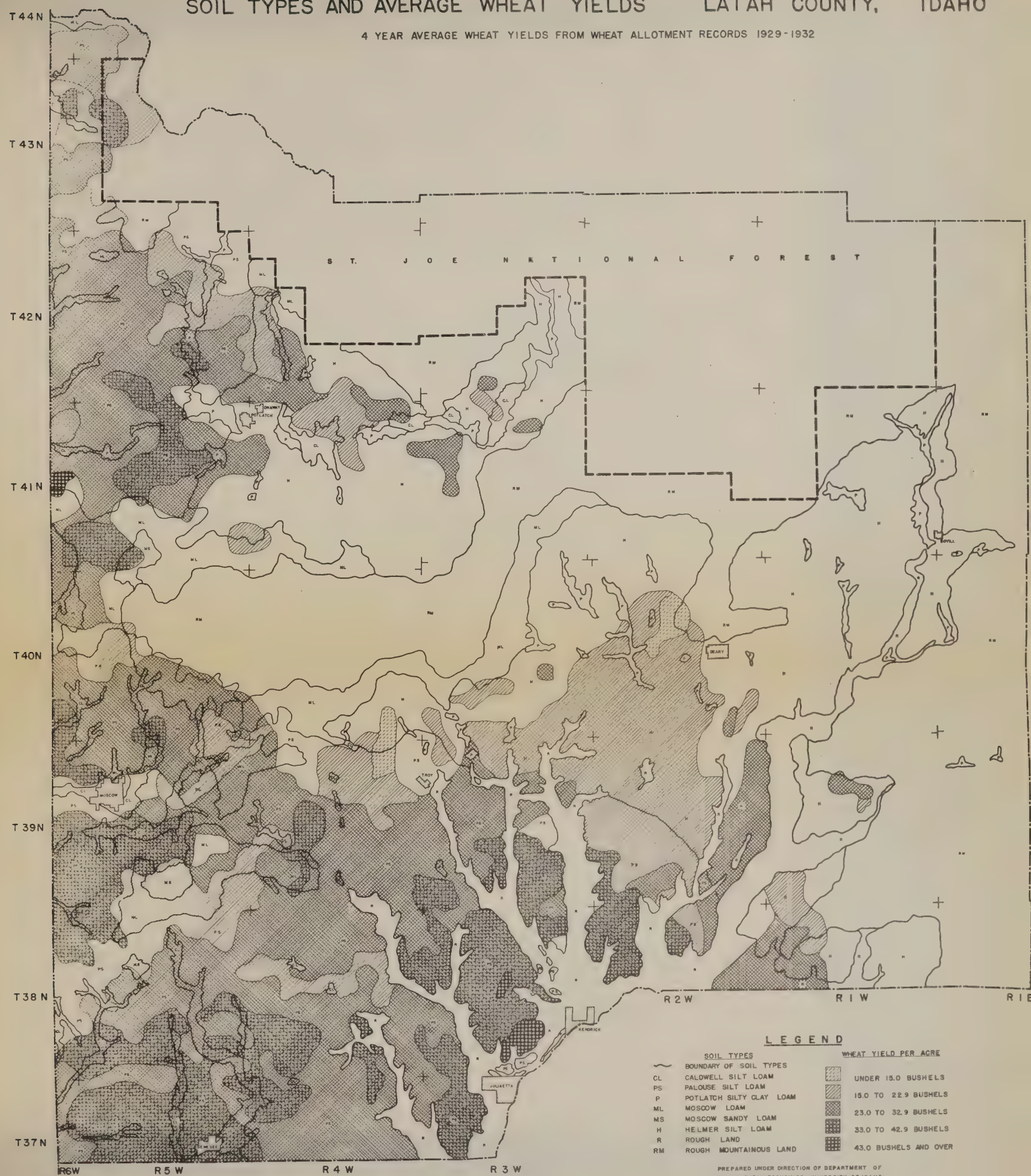
In general, the farms in this area, together with Areas 4, 12, 13, and 15, receive more precipitation than farms in the more northerly cultivated land out on the prairie. This accounts for the comparatively high yields of alfalfa hay in the Agricultural Areas Different Upgrade Land Management Problems.

[illegible] to convert the [illegible] in use area. The following data on Frost-free periods are the best available:

Sta. 3, Township 42 N., Range 8 W. - Jan. 10 to Sept. 1.
Sta. 4, Township 42 N., Range 5 W. - April 15 to Oct. 1.
Sta. 6, Township 42 N., Range 4 W. - May 20 to Sept. 15

SOIL TYPES AND AVERAGE WHEAT YIELDS LATAH COUNTY, IDAHO

4 YEAR AVERAGE WHEAT YIELDS FROM WHEAT ALLOTMENT RECORDS 1929-1932



PREPARED UNDER DIRECTION OF DEPARTMENT OF AGRICULTURAL ECONOMICS UNIVERSITY OF IDAHO COOPERATING WITH IDAHO LAND USE PLANNING OFFICE, RESETTLEMENT ADMINISTRATION; IDAHO STATE PLANNING BOARD; U. S. FOREST SERVICE; AND IDAHO EMERGENCY RELIEF ADMINISTRATION. BASE MAP AND SOIL TYPE BOUNDARIES FROM LATAH COUNTY SOIL SURVEY BY U. S. BUREAU OF CHEMISTRY AND SOILS JANUARY 1936

FIGURE 3

The season is usually shorter in the eastern part of Area 10, but there is considerable local variation in this respect.

In the western part of Area 9, from 50 to 100 percent of each quarter section is assessed as agricultural land. In the eastern portion, the proportion falls to from 15 to 49.9 percent with some quarter sections having less than 15 percent of their acreage in crop land. Some of the non-agricultural land will remain in woodland; some will be cleared and added to farms now in the area; and the rest will be available for new farms.

Agricultural lands are assessed at varying values. Near Potlatch they range from $27.00 to $32.99 per acre, and eastward along the Potlatch River assessed values range from $20.00 to $26.99 per acre. On each side of the strip along the river, the values again drop, ranging from $13.00 to $19.99 per acre; these lands will ordinarily be used for pasture.

Tax delinquency is not a serious problem. Only a comparatively few "forties" were tax delinquent for more than two years (as of September 1934). Most of the delinquency is found on cutover lands.

The changes which have taken place in ownership since 1933 do not indicate any serious maladjustment. Only two "forties" are owned by the county. No credit corporation has acquired land since 1933.

There were only six rural families on relief in the area. Three of these had only forty acres of land with an average cultivated area of twenty-eight acres each. Although the additional acres could be cleared, there would still be a deficiency from the standpoint of a full-time agricultural enterprise. Two relief clients owned eighty acres each, one with fifty acres of crop land, the remaining area tillable if cleared, and the other family with thirty acres under cultivation and an additional twelve acres clearable for tillage. The sixth relief client had 120 acres, of which eighty acres were cleared, but crop yields were comparatively low.

The solution to the difficulties of these individuals depends upon clearing enough land to provide sufficient income for a fair family living.

The area is comparatively well supplied with public services, although there is a need for more gravelled roads (Figure 4). Marketing facilities are ample, providing transportation to primary markets is improved.

The situation with regard to schools is somewhat complex. Inasmuch as a statewide survey of such problems is now being made by the State Department of public Instruction, it was deemed inadvisable to duplicate their work by a detailed study of the problem. Cursory investigation, however, indicates that several school districts are supported largely from outside sources. This situation is the result of several factors. First, there are probably too many school

there is considerable local variation in this respect.

In the western part of Area 3, from 50 to 100 percent of each quarter section is assessed as grain land. In the eastern portion, the proportion is as low from 15 to 49.9 percent with most quarter sections having less than 15 percent of their acreage in grain land. Some of the non-productive land will remain in woodlands; some will be cleared and added to farms now in the area; and the rest will be available for new farms.

Agricultural lands are assessed at varying values. Near towns they range from $50.00 to $64.00 per acre, and outside of these the institute later assessed to use from $20.00 to $60.00 per acre. Some of the strip along the river, the values again range from $24.00 to $40.00 per acre; these lands will ordinarily be used for pasture.

Tax delinquency is not a serious problem. Only a somewhat less "favorable" were tax delinquent for more than two years in 3 quarter lines. Most of the delinquency is found on outlying lands.

The counties which have taken place in commercial clubs do not tend to any serious maladjustment. Only the "Prairie" are owned by the county. No credit organization has acquired land since 1930.

There were only six rural families on a lot in the area. These had only forty acres of land with a average cultivated area of [illegible] acres each. Although this additional acres would be [illegible], there would still be a deficiency from the standpoint of a [illegible]. The [illegible] is assured, but the other family with thirty acres under cultivation can be additional family more economic for them. The [illegible] district [illegible] acres, or with eighty acres were cleared, [illegible] more economic [illegible].

[illegible] to the economics of these farms depends upon [illegible] land to provide sufficient income for a fair family [illegible].

[illegible] is so generally well satisfied with public services. [illegible] there is a need for more protected roads (figure 4). Marketing [illegible] facilities are ample, [illegible] transportation to primary markets [illegible].

[illegible] a mandatory survey of rural conditions is now being made by the Senate [illegible] of public lands [illegible], it was deemed inadvisable to [illegible].

PUBLIC SERVICES, LATAH COUNTY, IDAHO

MAY, 1937

PREPARED BY
THE IDAHO LAND USE PLANNING SECTION, RESETTLEMENT ADMINISTRATION, U.S.D.A., COOPERATING WITH: STATEWIDE HIGHWAY PLANNING SURVEY, UNIVERSITY OF IDAHO, IDAHO STATE PLANNING BOARD, WORKS PROGRESS ADMINISTRATION, COUNTY SUPERINTENDENT OF SCHOOLS.

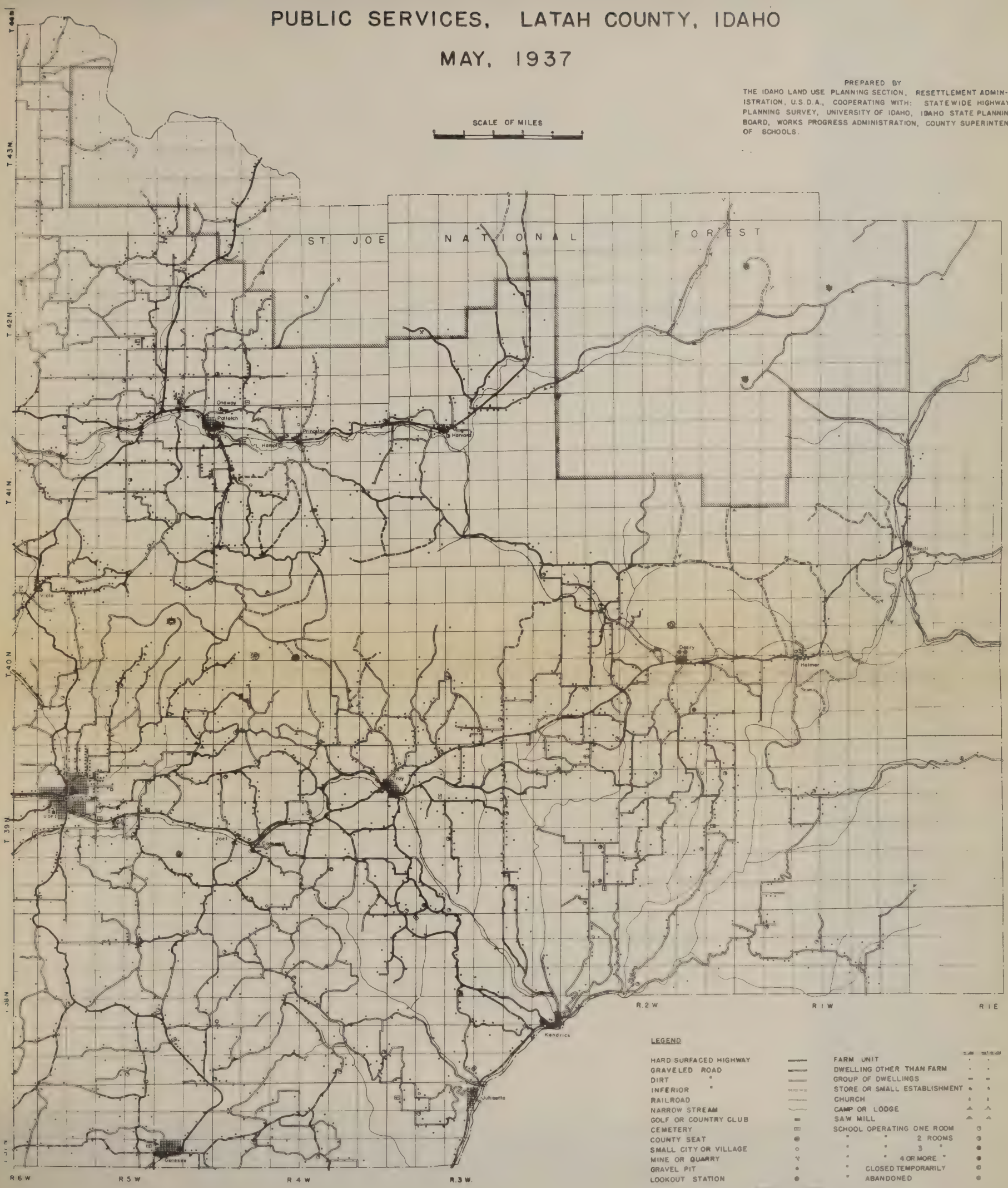


FIGURE 4

districts; and, second, because the area is not fully developed, there is considerable land having a low assessed value and the State is, therefore, forced under the law to bear a considerable part of the burden. The solution probably lies in reducing the number of districts through consolidation.

The cropping system followed is a wheat, feed grain, and hay (alfalfa) enterprise. Most of the crops are fed to livestock on the farm.

AREA 10. This area, south and east of Moscow Mountain, is a typical cutover district like Area 9, except in certain respects such as soils. The soil survey shows considerable areas of Moscow loam which prodominates in the western part, Helmer silt loam which predominates in the eastern part, and a small area of Palouse silt loam in the southwestern portion.

Climatic factors do not limit the adaptability of the area from the standpoint of a profitable farming system.

The same is true of topography, providing the steeper slopes and draws are seeded to permanent pasture.

The nature of the cover types varies within the area. Range 5 W. is all crop land. Ranges 3 and 4 W. are about one-half crop land with the balance mainly cutover and commercial timber. In Range 2 W. the proportion of cutover to commercial timber is higher. Commercial timber land should not be cleared for agricultural purposes until the stand has reached maturity.

In Ranges 4 and 5 W., agricultural lands are assessed at values ranging from $13.00 to $26.99 per acre with some quarter sections assessed at from $27.00 to $33.99 per acre. In the rest of the area, practically all of the agricultural land is assessed at values ranging from $13.00 to $19.99.

In September, 1934, about one-half of the area was tax delinquent, except north of Deary where three-fourths of the land was delinquent. The delinquency was not serious, being confined largely to the 1932 levy.

The great bulk of the area is in private ownership and should remain so. No significant changes occurred between 1933 and 1936 in either credit corporation or county holdings.

There were about eighteen rural families on relief in 1934, due chiefly to a lack of sufficient cultivated acreage to support a family without supplementary employment. There were about six cases in which additional lands would need to be acquired in order that eighty acres of clearable land might be obtained. Another reason for their dependency was the fact that some of the families had been on those farms for less than one year and had not had the opportunity to obtain sufficient income for maintenance. A third reason, which applied in only a few

cases, was poor farm management resulting in a decline in crop yields.

The area is fairly well supplied with public services, although the mileage of gravelled roads might well be extended.

Due to their low tax base about two-thirds of the school districts derive more than 50 percent of their current revenues under state and county apportionment laws. However, as undeveloped agricultural lands are cleared, their assessed valuation will rise, and the proportion of current income derived from outside sources will decrease. Consolidation of school districts would also help to reduce the amount of subsidy necessary.

Marketing facilities are adequate.

The cropping systems followed in the area did not change much between 1933 and 1935. In Ranges 4 and 5 W., the predominant system is a wheat, feed-grain, and hay enterprise. In the rest of Area 9, we find peas added to the system, except south of Deary where beans are substituted for peas.

Farmers in this area have kept much less livestock than the farmers in Area 9. One reason for this lag in shifting from cash-cropping to a livestock enterprise is that for a number of years peas have been a profitable addition to the cropping system, but pea production in Area 10 will probably tend to decrease for two reasons; first, the combination of lower yields than in Area 14 and low prices will tend to force many farmers out of pea production; second, pea weevil damage is much higher on cutover lands because the timber and brush in the area offer greater opportunities for winter hibernation.

AREA 11. This area south of Moscow offers somewhat of a problem as to the nature of the farm enterprise to which it is best adapted. Although the soils were surveyed as Palouse silt loam, wheat yields averaged considerably less than on surrounding farm lands. A preliminary field inspection indicated that a more detailed soil survey of the area is necessary.

In this connection, reference should be made to a reconnaissance soil erosion survey of Latah County made in September 1936. The survey was carried on jointly by the Soil Conservation Service and the Land Use Planning Section of the Resettlement Administration. It was noted that in this area the soils showed a marked granitic influence, which would account, at least in part, for the lower crop yields. Because of the nature of the soils and a steeper topography than in Area 14, there is a tendency toward greater erosion than in that district.

From the standpoint of climate, cover, tax delinquency, public services, ownership, etc., the area resembles Area 14. The essential difference lies in the soils and topography which affect productivity

and erosion.

AREA 12. Area 12 at Park, surrounded on the north, west, and south by deep canyons, and on the east by a mountain, is somewhat isolated, especially during the winter season. There has been considerable question, therefore, as to the best use to which it is adapted. Because of its somewhat limited extent, it probably would not justify the expense of providing an all-weather road. Inasmuch, however, as it is proposed to build a State highway through the area, the matter of economic justification for providing facilities for year-round travel becomes unimportant.

The soils are mapped as Helmer silt loam. There is considerable variation in the yields obtained in the area with the low yields probably reflecting management factors rather than any inherent physical limitation (i.e., when compared with other areas having similar soils).

There are about twenty-five quarter sections which have land assessed as agricultural. About one-third of the quarter sections have from 30 percent to 50 percent of their area assessed as agricultural land, about one-third from 15 percent to 30 percent, and another one-third less than 15 percent agricultural land. The assessed valuations average less than $13.00 per acre.

Tax delinquency is not a serious problem. Many forties were delinquent for the 1929 levy, although most of the delinquency occurred in connection with the 1932 levy.

There were sixteen families on relief in 1934, due chiefly to lack of sufficient cleared acreage. The average size of farm was ninety acres, with an average cleared area of only twenty-six acres. In some cases, poor management was partly responsible for this dependency. If management practices are improved to conform more closely with those generally advocated for cutover lands in the country and an all-weather highway is constructed through the area, it will probably justify being placed in the class Agricultural Areas Offering Special Land Management Problems.

AREA 13. This area near Linden has been developed more recently than other cutover lands in the county, but apparently it will continue to remain in agriculture.

The soils are mapped as Helmer silt loam, and their management requires the adoption of practices similar to those followed in Area 10, although the topography is not quite so rolling nor is frost a limiting factor. As a matter of fact, beans are substituted for peas in the cropping systems, especially in the western portion.

In the western part of Area 13, approximately two-thirds of the land is cultivated and the rest is restocking cutover with some

commercial timber, Only a comparatively small proportion of the eastern part of this district is cultivated land, the remainder being restocking cutover.

The assessed valuations per acre of agricultural land are comparatively low, being between $13.00 and $19.99 per acre in the western part and under $13.00 in the eastern part.

Tax delinquency in this area, confined largely to cutover lands, has not been a serious problem.

Of the two rural relief clients in Area 13 one had only forty-two acres in cultivation, which was inadequate to support a family without supplementary employment, in spite of the fact that the crop yields (wheat, oats, and hay) were comparatively high. The other client had none of his forty-acre tract under cultivation. Additional cleared land will remove the chief cause of dependency of the former client, but increased employment will be the determining factor in the case of the latter.

A gravelled road from Kendrick to the boundary of Area 13 should be improved beyond that point into the area. The improvement of the roads in the area will make the marketing facilities at Kendrick and Juliaetta available the year around. The schools in the areas derive over 50 percent of their current revenues from outside sources, but this situation will be improved somewhat as additional lands are cleared.

The cropping systems followed differ somewhat between the eastern and western parts. In the western part, wheat, feed grains, beans, and hay are the crops usually found. In the eastern part, the beans are usually eliminated from the system, partly as a result of a somewhat shorter growing season than is found in the western part.

Conclusions and Recommendations

Based upon the information obtained from the staff of the Idaho Agricultural Experiment Station and operators in the areas, it is apparent that certain conditions must be accepted as the minimum requirements for a farm enterprise which is expected to furnish a fair family living. Approximately 160 acres are needed, of which about eighty acres should be crop land. Of the remainder, a large part should be improved pasture. This usually involves the seeding of sweet clover and grass mixtures on burned-over stump lands. It must be kept in mind that although agriculture is the recommended use for the area, not all of the land should be cropped. It is expected that much of the area will be valuable only for farm woodlots, woodland pasture, etc. The essential thing is that such lands can be used as a part of a farm organization.

The assessed valuations per acre of agricultural land are comparatively low, being between $15.00 and $[illegible] per acre in the western part and under $15.00 in the eastern part.

The delinquency in this area, contrasted strongly to outstanding [illegible] over a [illegible] period.

Of the two rural relief clients in Area 15 one has only [illegible] two acres in cultivation, which was insufficient to support a family without supplementary employment. In spite of the fact that [illegible] [illegible] work, and they were comparatively [illegible]. The [illegible] and some of his [illegible] water [illegible]. Although [illegible] land will remove the other cause of dependency of the [illegible] [illegible], not increased employment will be the determining factor in the case of the latter.

A provincial road from [illegible] to the boundary of Area 15 should be improved beyond that point into the area. The improvement of the roads in the area will make for marketing facilities at reasonable and satisfactory availability the [illegible]. The population is [illegible] over 50 percent of their current revenue from marketable resources, but this situation will [illegible] improved economy as additional land is cleared.

The cropping systems followed differ somewhat between the [illegible] and hay are the crops usually found. In the eastern part, the [illegible] are usually cut [illegible] from [illegible], partly as a result of a [illegible] short growing season which is found in the eastern part.

[illegible] and Recommendations

Based upon the information obtained from the staff of the Farm Advisorship Department [illegible] and operators in the area, it is apparent that certain conditions must be accepted by the minimum requirements for a farm enterprise which is [illegible] to provide a fair family living. Approximately 160 acres are needed, of which [illegible] [illegible] acres should be crop land. Of the remainder, a large part should be improved pasture. This usually involves the [illegible] of cleared and [illegible] land. [illegible] is kept [illegible] and [illegible] that although [illegible] in the recent [illegible] for the area, but all of the land should be cleared. It is [illegible] that most of the area will be valuable only for farm woodlots, [illegible] and [illegible]. The economical [illegible] of such farm units [illegible] as a [illegible] of farm organization.

In the management of the land, according to the source quoted above, several things must be kept in mind. First, legumes must occupy a large share of the land in the rotations practiced. Second, crop residues should be returned to the soil. Third, gypsum must be applied to the land, preferably at the rate of 200 pounds per acre in alternate years while the legume crop is being grown. The influence of gypsum on alfalfa yields is very marked. Fourth, due to the erosivity of the soils, the steep slopes and draws must be seeded down to meadow or permanent pasture. Perhaps as much as 30 percent of the cleared area must be treated in this way.

Rotations specifically adapted to cutover areas have been recommende by the Idaho Agricultural Experiment Station at Moscow, Idaho. Information can be obtained by writing to the Station.

Another condition of successful operation involves the type of farm enterprise necessary to profitable farming. Based upon the experience of a large number of operators in these areas, it is uneconomical to attempt to compete on a cash-crop basis with operators on agricultural land. It is much more efficient to keep livestock and feed the crops grown on the farm. In the first place, hay yields are high compared with the yields of small grains. In the second planco, keeping livestock permits the efficient use of the range and pasture available in and near the area.

The particular type of livestock system selected will vary, depending upon local conditions. For example, a hog enterprise could be added where considerable pea stubble is available. This will be the case in the western part of Area 9. The addition of a dairy enterprise is possible in part of the area because of two conditions: First, the availability of good summer pasture along the stream bottoms; and, second, fairly good roads which make the markets accessible. The numbers of livestock kept will depend largely on two factors, labor requirements and the ability of the farm to produce sufficient winter feed.

These, then, are the essential elements in the situation:

1. A minimum sized unit of eightyacres of crop land in addition to pasture land

2. A rotation in which legumes predominate

3. A feed-livestock enterprise rather than a cash-grain system, which will involve an increase in livestock numbers

Increasing the proportion of legumes in the rotation and the amount of permanent pasture is especially important in Area 11, and will, in turn, require a larger proportionate increase in livestock numbers in that area.

[illegible] on the farm, normally to be [illegible] above. [illegible] stage in mind. First, legumes must occupy a [illegible] share of the land in the rotation. Second, crop residues should be returned to the soil. [illegible] grass must be applied to the land, preferably at the rate of 100 tons per year [illegible] years until the legume crop is [illegible]

Potatoes are specifically suited to outlayer areas have been [illegible] the Farm Experimental Station at Kenora, Ontario. [illegible] can be obtained by writing to the Station.

Another essential of successful operation involves the type of farm machinery necessary to profitably farming. Based upon the experience of a large number of operators in these areas, it is economical to operate to a farm on a one-crop basis with operators on approximately [illegible]. It is much more difficult to keep livestock and feed the crops grown on the farm. In the Peace Region, hay yields are [illegible] compared with the yields of [illegible] grains. In the Kenora Region, however, [illegible] the [illegible] of the range and pasture available in and near the area.

The farm labor type of livestock appears suitable will vary according upon local conditions. For example, a beef operation could be added where consideration for [illegible] is available. This will be the case in the Kenora part of [illegible]. The addition of a dairy enterprise [illegible] in part of the area because of two possibilities. First, the availability of good summer pasture along the [illegible] bottoms and, second, [illegible] in winter. [illegible] of livestock herd will depend largely on two factors, labor requirements and the ability of the farm to produce sufficient [illegible]

These, then, are the main points of [illegible] in the situation:

1. A shortage exists [illegible] of [illegible] land in addition to [illegible] land

2. A [illegible] in which legumes predominate

3. [illegible] economically [illegible], which will [illegible] increase in livestock numbers

Increasing the proportion of legumes in the rotation and the amount of permanent pasture in conjunction [illegible] will, in turn, result in a lower proportionate increase in livestock numbers in that area.

In conclusion, it must be pointed out that lands adjacent to the forest must be managed very carefully according to the best practices if a stable agriculture is to result. Only by adopting practices which will conserve soil fertility and control erosion can agriculture be maintained on such lands.

Agricultural Areas Suited to Both Cash-Crop and Livestock Farming (Areas 14 - 17)

Description of Areas

AREA 14. The lands in Areas 14 and 15, among the most productive agriculturally in the Palouse region (Figure 3), require little proof in justification of the major use to which they are put. There are certain problems, however, of which some mention will be made.

The topography is gently to strongly rolling. It is this factor, in addition to the cropping systems which have been practiced in the past, which has caused soil erosion to become a serious problem. With proper management, the factor of topography need not be a limiting influence on the agriculture of the area.

Moisture conditions are much like those recorded at Moscow, Idaho which has had an average annual precipitation over a twenty-five-year period of 21.54 inches. In the northern part of Area 14, average frost-free periods extending from May 1 to October 1 are reported in a number of places.

The major part of the area, when mapped by quarter sections, is assessed as 80 percent or more agricultural land. On the fringes, the proportion drops as low as 50 percent.

Most of the farm land is assessed at the rate of $27.00 or more per acre with a considerable area assessed at rates varying from $20.00 to $26.99 per acre. These lands usually show lower wheat yields than those assessed at higher rates.

Taxes were delinquent on very little of the land as of September 1934. The delinquency was probably the result of extremely low agricultural prices and/or the tax moratorium, rather than of any maladjustment in land use.

Between 1933 and 1936 credit corporations acquired ten holdings in the area, but disposed of eighteen. The county had title to one piece of property in 1933 and has made no further acquisition.

There were not more than twelve rural families on relief and of these, seven families had ten acres or less.

The areas are well supplied with roads and schools, although the mileage of gravelled roads should be extended. In practically all cases over 50 percent of the revenue of school districts is local in origin. Marketing facilities also are ample, except for dairy products.

The soils of the areas as mapped are mainly Palouse silt loam (with some Moscow loam included) which is rated as a first-grade soil. There are, however, certain local variations which account for the lower yields in these specific sections of the areas. Where Moscow loams occur, considerable care must be exercised to control erosion, because of the inherent erosivity of such soils. All of the soils are considered quite productive, average wheat yields varying from twenty-three bushels to fifty bushels per acre.

Three cropping systems predominate in Area 14:

1. Wheat and summer-fallow

2. Wheat and peas

3. Wheat, peas, feed grains, and hay

At the present time the trend is for peas to supplant summer-fallow, and feed grains and hay to be added to the wheat and pea enterprises.

The farms are large, averaging about 320 acres with many farms containing up to 800 and 900 acres.

The most serious problem in the area is soil erosion. The number of "clay points" and gullies is increasing. As a consequence, yields go down and operating costs rise.

AREA 15. This area covers the ridges in the southeast section of the county. These ridges are a part of the Palouse prairie region and have been set off from one another by the erosive action of the Potlatch River and its tributaries. The soils are mapped as Palouse silt loam.

This area, with certain exceptions noted below, compares closely to Area 14. For example, it receives a little more precipitation in the northern part. The main difference arises from the fact that the canyons afford such good air drainage that the length of the growing season is materially extended. As a result, beans have become an important crop in these areas.

With respect to assessed valuation and percentages of land designated as agricultural on the tax rolls, Areas 14 and 15 are very similar.

There is less tax delinquency than in any other agricultural area

in the county.

The county owns only two properties in the area, both acquired in 1936. Financial corporations have acquired four properties and disposed of eight properties between 1933 and 1936.

There were only about ten rural relief cases in the area. These were either living on very small acreages or were merely squatting on places without attempting to farm them.

The area is well supplied with public services, except that more gravelled roads are needed to make winter travel easier.

All except four of the school districts derive more than 50 percent of their current revenues from local sources. Many districts have high costs per pupil due primarily to a decrease in school population, which in turn is the result of consolidation of farm units and the maturing of the population.

Marketing facilities are adequate.

The predominant cropping system followed is a wheat, beans, feed grain, and hay system.

Although the soils in these areas are quite fertile (most of the farms produce wheat at a rate of thirty-three bushels or more per acre), soil depletion, soil erosion, and weed control are becoming serious problems.

AREA 16. This small area near Moscow is discussed separately from the surrounding area, not because of any inherent difference in physical characteristics, but because of a difference in the intent in use.

Most of the holdings are small, ranging generally from ten to fifteen acres in size. No attempt is made at operation on a full-time commercial scale. The emphasis is, rather, on their use as part-time farm enterprises. The predominant factor is an economic one, namely, proximity to the town of Moscow and its opportunities for employment. No adjustment in land use is required.

AREA 17. The acreage included in this area near Juliaetta and Kendrick is comparatively small; but because of the intensive type of farming practiced, the agriculture of the area is significant.

Most of the land is owned by private individuals and should remain in such ownership. The holdings are mainly forty or eighty acres in size.

The soils are mapped as Yakima loam, an alluvial soil which has developed under a grass vegetation. It is fairly high in both organic and mineral fertility. Inasmuch as the topography is relatively level, the erosion hazard is not great.

The amount of precipitation is very low. Fortunately, most of the farms have natural sub-irrigation with a few farms surface-irrigated. Truck gardening and fruit production are the main enterprises because of the long growing season.

Below Juliaetta, seventy per cent or more of the quarter sections are assessed as agricultural land, whereas above Juliaetta, the proportion of each quarter section so assessed, with but few exceptions, varies from 30 percent to 69.9 percent.

The agricultural land near Juliaetta is assessed at the comparatively high figure of from $34.00 to $40.99 per acre with valuations elsewhere ranging from $27.00 to $33.99 per acre.

Practically none of the lands in this area were tax delinquent in September 1934. The few exceptions were delinquent only for 1932 taxes.

The only changes in corporate ownership which occurred since 1933 involved the disposal of two parcels of land by credit corporations.

There were only two rural clients on the relief roll. One of them was a part-time farmer who had been unable to find supplementary work. The other was on relief for a short time until produce from his farm could be sold.

The area is well supplied with roads, schools, and marketing facilities.

Most of these farms have from five to ten acres of crop land utilized mainly in the growing of watermelons, cantaloupes, and tomatoes. In addition, most of the farmers raise a few raspberries and cherries. Some of the farms in the area are not suited to the production of truck crops. The alternative enterprise usually selected is dairying, with most of the crop area devoted to alfalfa hay.

The farmers in the area are relatively prosperous primarily as a result of two things: first, the high quality of truck crops produced; and, second, price advantage on the local markets due to the early growing season.

Conclusions and Recommendations

It is estimated by members of the staff of the Idaho Agricultural Experiment Station that from 20 to 30 percent of Areas 14 and 15 (principally the eroded hillsides) must be retired from grain production and seeded to grass and leguminous hay, either as a permanent pasture seeding or as a long-time rotation with seven years of grass followed by three years of grain. The remaining 70 to 80 percent should be put in a rotation with legumes grown two years out of six.

Strip farming should be introduced on lands adapted to such practices.

In connection with these changes in cropping practice, livestock, especially beef cattle and sheep, should be added to the farm set-up to utilize the increased feed supplies.

With reference to the proper size of operating unit, little can be said at this time except that the trend has been toward larger units. Additional research is needed to determine the relationships among such factors as size of farm, type of farm, tenure, soil conservation, and the farm as a business.

LAND SETTLEMENT

A study of settlement experiences in Latah County in the past indicates that they have not been uniformly successful. Contrasted with the successful farm operations on the prairie and the better cutover lands is the plight of those who have settled on the poorer lands, especially along the slopes of Moscow Mountain. Reference has already been made to the settlement which has occurred on lands for which the recommended use is forestry.

Many of the settlers in cutover areas have not achieved economic independence. Over 200 rural families were on relief at one time or another during 1934-35; many are still receiving relief in one form or another. The reasons for dependency were numerous, but most cases could be attributed to one or more of the following:

1. The client was attempting to develop a farm which was submarginal from the standpoint of soils, topography, climate, etc.

2. The difficulty of clearing cutover land had prevented his clearing a sufficient acreage to provide a family living.

3. Many clients had been relying on outside employment for the greater part of their incomes - incomes which decreased greatly with the depression of the extractive industries.

The most conspicuous cause of the lack of success in attempting to farm the poorer cutover lands is found in the cultivated acreage figures taken from rural relief case records. Out of eighty-six cases reporting, seventy had less than thirty-one acres cleared (Figure 5). More important still, the rough topography of these areas makes it extremely difficult to obtain eighty acres of cleared land in one unit. (It is estimated that 160 acres is required for a minimum-sized farm unit on cutover land of which at least eighty acres should be in crops, and an additional forty acres should be in improved pasture.)

In the fall of 1934, some records were taken on farms in or contiguous to the Moscow Mountain addition to the St. Joe National Forest. Eliminating farms with more than 100 acres of cultivated land, located chiefly on the prairie, the remaining 110 farms had an average cleared acreage of only thirty acres. Furthermore, crop yields were comparatively low. To supplement the farm income, eighty-seven out of a total of 158 farmers during the previous three years on the average worked off the farm about fifty days annually with earnings of about $135 per year. In view of the small cleared acreage, low productivity, and the comparatively little supplementary income that could be obtained, it can be readily understood why many of these people had expressed a desire to sell their holdings.

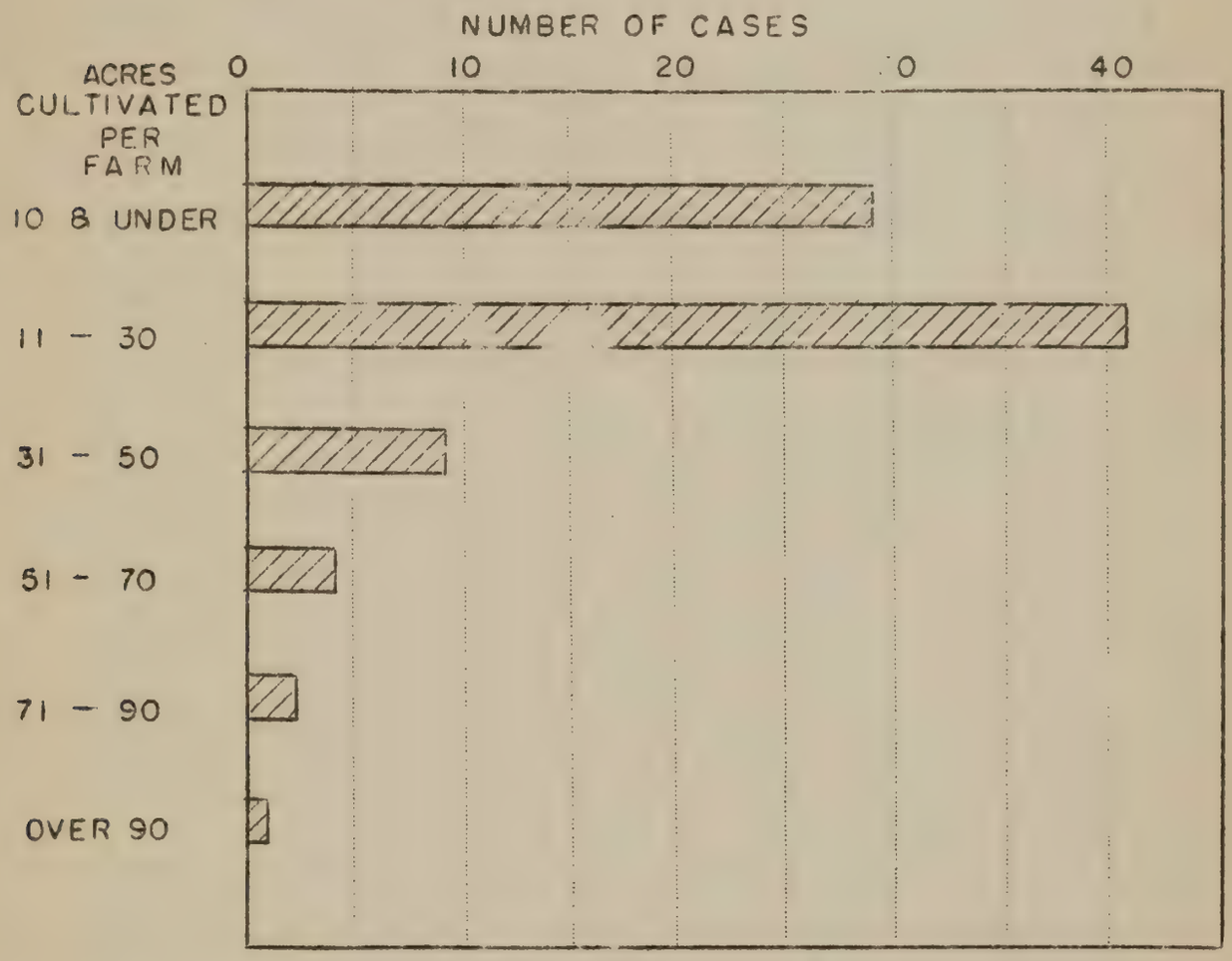
As far as new settlement is concerned, there is probably less undeveloped farm land in Latah County than in most of the other North Idaho counties. It is extremely difficult to obtain a farm in the prairie area unless the prospective settler has a large capital. In the cutover agricultural areas, a large part of the undeveloped land

FIGURE 5

CULTIVATED ACREAGE

CLOSED RURAL RELIEF CASES, LATAH COUNTY, IDAHO

DECEMBER 1935



PREPARED BY IDAHO LAND USE PLANNING SECTION COOPERATING WITH, IDAHO EMERGENCY RELIEF ADMINISTRATION

should be cleared and added to existing farms which have less than the amount of crop land required for an economic unit. Most of the undeveloped agricultural land is in the eastern part of Area 9, in Area 10 near Deary, and in Area 13.

From Figure 2, it can readily be seen that agricultural development in Latah County is principally a matter of land clearing. In selecting a location, it is important to remember that the nature of the cover as to tree species, age of stand, density of stand, elapsed time since logging, etc., is very important from the standpoint of clearing costs.*

In view of the difficulty of clearing land, it might well be that some form of outside assistance should be given. It has been suggested by local farmers and county officials that land clearing projects be set up through some public agency. There is more justification for public assistance in land development by clearing land in North Idaho than by irrigation of arid and semi-arid lands, because the objective of such development is the rehabilitation of a population already in the area. As a result, not only is the economic status of the resident population bettered, but the burden of relief costs is also reduced.

The distribution of roads, schools, and marketing facilities in relation to present and potential settlement can be observed from Figure 4. The distribution of these services as far as the agricultural lands are concerned, is apparently adequate. Future extensions of such

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*Idaho Agricultural Experiment Station Bulletin 158, entitled "The Cutover Lands of Northern Idaho," contains valuable information relative to land clearing and choice of crops. This may be obtained, upon request, from the Idaho Agricultural Experiment Station at Moscow, Idaho.

services should be confined to these lands.

When it is considered what the social and private costs of developing even the better cutover lands have been, it is important that investments, both public and private, which depend upon an agricultural economy should only be directed toward those lands which will give a sufficiently large and stable return to justify their development.

LAND OWNERSHIP WITH SPECIAL EMPHASIS ON FOREST LANDS

No discussion of land in terms of best potential land use is complete without a consideration of the type of ownership. This is especially true in the case of forest lands.

Reference to Figure 6 will indicate at once how checkered the ownership pattern is in Latah County. Roughly speaking, about one-half of the area within the boundary of that part of the St. Joe National Forest which is in Latah County is in private ownership. The intermingling of types of ownership not only makes fire protection more difficult (especially where the private holdings are settled), but also makes it harder to carry out a sound development plan for cutover lands which should remain in forest. It is much more efficient to deal with large units, blocked out according to a logical plan, than with small, isolated units.

The four major types of ownership in the county are private, county, state, and Federal. The following paragraphs present a brief discussion of the relative merits of these various types of ownership and the problems involved in effecting changes in ownership.

Private ownership, under present conditions, is not suited to the

CLASSIFICATION OF OWNERSHIP OF RURAL LANDS

LATAH COUNTY

—IDAHO—

DECEMBER 1934

COMPILED UNDER THE DIRECTION OF
DR PAUL A EKE, G.O. YOUNGSTROM, CARL TJERANDSEN
DEPARTMENT OF AGRICULTURAL ECONOMICS
UNIVERSITY OF IDAHO—MOSCOW, IDAHO
COOPERATING WITH:—
IDAHO STATE PLANNING BOARD
IDAHO EMERGENCY RELIEF ADMINISTRATION
U.S FOREST SERVICE

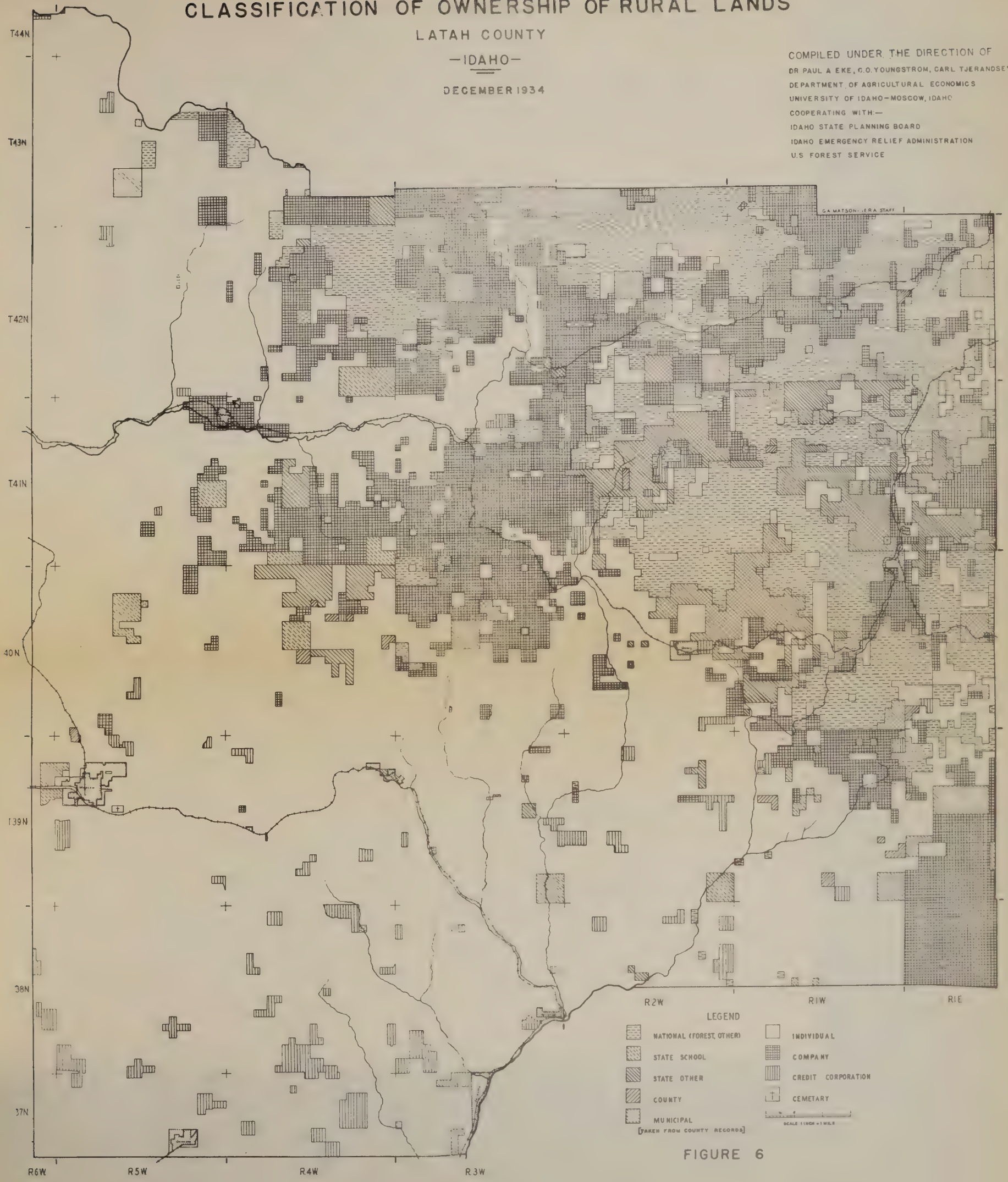

FIGURE 6

development of cutover lands in the interest of permanent forest crop production, except where circumstances of production are exceptionally favorable. The long period of time which must elapse between outgo and income, alternative opportunities for investment, prevailing tax structures, etc., are factors which work to the disadvantage of private enterprise in the development of cutover lands for forest use.

The county as an owner of forest land would appear to be in a somewhat similar position. The county government is not organized for, nor does it have the resources required for the proper development and management of large areas of forest lands. The case is different where only comparatively small tracts of forest land to be used for recreational puposes are involved. The county can influence land use much more effectively by the disposal of such lands as it may acquire through tax sale or other means to a more appropriate agency (considering the uses to which the lands are best adapted.)

The position of the State in this program of forest conservation requires clarification. Under the Fulmer Act, it is proposed that the several states shall be assisted by the Federal Government to acquire lands to be developed as state forests. (No lands have as yet been acquired under the Act.) The holdings of the State are so intermingled with the holdings of other agencies, that some policy looking toward consolidation must be worked out. It is questionable, however, whether the State with its comparatively small tax base, is capable of assuming the financial burden of protection from fire and disease and instituting a positive program for developing all of the cutover land within its borders which should remain in forest use.

It would appear that an important part must be played by the Federal Government in the development and management of such lands. Large acreages of cutover land in Latah County have already been acquired by the United States Forest Service from private timber operators by donation. In many cases where such lands have not been donated directly to the United States Forest Service, they have become tax delinquent and have reverted to the county. Unless these county lands should happen to lie in agricultural areas, they should not be disposed of except under suitable restrictions which will prevent their being used for agriculture. If they lie within the boundaries of the St. Joe National Forest, they can be either sold or donated to the Federal Government. Recommendations for Federal legislation are being considered by planning agencies which, if enacted, will extend Federal authority to permit the purchase of lands for National Forest purposes in the permanent forest land areas outside the existing forest boundaries.

A number of advantages may accrue to the county when county forest lands are sold or donated to the United States Forest Service rather than disposed of at auction to private interests. Individual capital losses may be prevented, the burden on the county due to the necessity of providing schools and roads in poor areas will be reduced, and the relief burden will be decreased. Also, when lands are acquired by the United States Forest Service, provision is made for the sharing of revenues with the county government.

In view of the advantages of operating consolidated units, a definite program should be set up to bring about such land exchanges as will promote a sound land use program. A movement in the direction

of effecting the blocking up of lands in the same ownership is found in a recent amendment to the State Constitution permitting the State to exchange lands with the Federal Government.

The matter of the relation of type of ownership to land use is of such importance that it not only deserves but requires the attention of planning agencies in the county and State.

EXAMINATION OF INDIVIDUAL TRACTS NECESSARY

In conclusion it should be emphasized that a land classification such as this must of necessity be somewhat generalized. Unquestionably some locations within an area mapped as agricultural will not prove successful from a farming standpoint. Furthermore, due to lack of detail in the soils survey, the boundary between the agricultural and non-agricultural areas must not be accepted without question. For these reasons, each location should be investigated carefully before any investment is made or settlement takes place, especially near the boundaries of the non-agricultural areas. Not only must each location be investigated thoroughly, but only the best farming practices must be followed if soil erosion and depletion of soil fertility are to be prevented.

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